

S. EPIDERMIDIS STRAIN K28 SdrG

FIG. 1

CODING SEQUENCE FOR Sdraf - INCLUDES FLANKING SEQUENCES

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tatggataaaatttatgtttataaaggatttacataaaaaatgttaatgcaatttacaaggta
Y W I N Y A Y K V F T - K C K C N L Q V
aatattcaaattttccttgtaaaatatttttaactggagggtatagtatgtaaaaag
N I Q I S L - N I Y F N W R Y S M K K
agaagacaaaggaccaattaaacaaaggaggtggattttatccaaacaaaggtaaacaaggta
R R Q G P T N K R V D F L S N K V N K Y
tcgatttaggaaagttcacagtaggtacagcttcaataactcgtgggtacgttaatgttt
S I R K F T V G T A S I L V G A T L M F
ggtgtggccgcaagacaatgtggctaaaggcggtgtaaaggacaatcaatttagaatacgcttcaaaa
G A A D N E A K A A E D N Q L E S A S K
gaaggaaacaaaggtagtgcgtataatgtaaaaactcaaaaactcaatcaaggatcgatttagac
E E Q K G S R D N E N S K L N Q V D L D
aacggatcaacataatgtttctggaaaaacaaatgttaaacaatgtcaactgtggaaaaaaa
N G S H S S E K T T N V N A T E V K K
gttggaaaggccaccaacggacaatgttacgttatctaaggcctaaaggcttaatgtggacg
V E A P T T S D V S K P K A N E A V V T
aatggatcaactaaacccaaaaacaaacagaaggccaccaactgtttatgtggaaatcaatagct
N E S T K P K T T A P T V N E S I A

FIG. 2

gaaacacccaaaaccctcaactacacaaggattcgactgagaaggaaataatccatctta
 E T P K T S T Q D S T E K N N P S L
 aaagataatttaattcatctcaacgacatctaaggaaagtaaaaacaggacgaaacattct
 K D N L N S S T T S K E S K T D E H S
 actaaggcaatgtcaataatcaaataatccatcaataacgacatcacaaatgactctccaaact
 T K Q A Q M S T N K S N L D T N D S P T
 caaagtggaaaacttcatcaacaaggcaataacgacatcacagataatcagtcagcaccct
 Q S E K T S S Q A N N D S T D N Q S A P
 tctaaacaaatttagattcaaaaaccatcaggaaacaaaaaggatataaaaacaaaatttaatgat
 S K Q L D S K P S E Q K V Y K T K E N D
 gaaaccctactcaaggatgttgaacacacgacaactaaattaaaaacacccctctgtttcaaca
 E P T Q D V E H T T K L K T P S V S T
 gatagttcagtcataatgcaaggattcacacgaaatgtgttagtttaggttgtt
 D S S V N D K Q D Y T R S A V A S L G V
 gatttctaattgaaacagaaatcaatgcagtttagagacaatttagattaaaagct
 D S N E T E A I T N A V R D N L D L K A
 gcatcttagagaacaaatcaatgaaacatgtgttagctgaaaggactaaaaaaagactttct
 A S R E Q I N E A I I A E A L K K D F S
 aaccctgtttagttcgatatacgccatttagctctaaccaggatctcaatcaataaaaattca
 N P D Y G V D T P L A L N R S Q S K N S

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FIG. 2(*cont'd*)

FIG. 2 (cont'd)

gtgacttatctcaatggttcaacaggcacaggggataatccatatagtcttaggt
 V T Y L N G S S T A Q G D N P T Y S L G
 gactatgtatggtttagataaaaataacgggttgttccaaggatgtgagaaagggttta
 D Y V W L D K N K N G V Q D D E K G L
 gcagggtttatgttacttaaaggacagtaacaataagagaattacaacgtgttaactact
 A G V Y V T L K D S N N R E L Q R V T T
 gatcaatctggacattatcaatttggataatttacaaaatggAACgtacacagtcgagtt
 D Q S G H Y Q F D N L Q N G T Y T V E F
 gcgattcctgataattatacggccatctccggcaaataatttacaaaatgtgcaataagat
 A I P D N Y T P S P A N N S T N D A I D
 tcagatggtaacacgttacacgttaaaggtagttgttgcggcaaggaaacaaattaaat
 S D G E R D G T R K V V A K G T I N N
 gctgataatgtactgttagataactggcttttttttttttttttttttttttttttttttt
 A D N M T V D T G F Y L T P K Y N V G D
 tatgtatggaaagataacaataaaggatggatccaaaggatgtgacaatgtgaaaggaaattttct
 Y V W E D T N K D G I Q D D N E K G I S
 ggtgttaaagtaacgtttaaaaataatggagatacttggcacaacgacaacagat
 G V K V T L K N G D T I G T T D
 tcaaattgttaataatgtaaattcacagggttttagagaacggggattacacaataatgttag
 S N G K Y E F T G L E N G D Y T I E F E

FIG. 2 (cont'd)

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acggccggaaaggctacacaccgactaaacaaaactcgggaaagtgcacgaaaggatca
T P E G Y T P T K Q N S G S D E G K D S
aacggtaacgaaaacaacaaacaaacgtcacagtcaaaaggatgtgcagataataaaacaataggactcagggt
N G T K T V T V K D A D N K T I D S G
ttctacaagccaaacataacttaggtgactatgttatggaaaggatacaaaataaagatgggt
F Y K P T Y N L G D Y V W E D T N K D G
attcaagacgacagtggaaaaggattctggggattaaaggatgtgcacgttaaaagataaaaaat
I Q D D S E K G I S G V K V T L K D K N
ggaaatggccattggacaacgacaacgacgcaaggatggcatttcaatttaaaggattta
G N A I G T T T D A S G H Y Q F K G L
gaaaatggaaaggctacacatggagacaccatcaggattacaccggacaaaaggcg 28
E N G S Y T V E F T P S G Y T P T K A

FIG. 2 (cont'd)

aattcaggtaaagatataactgttagattccaaacggataacaacaaacatccattaaac
N S G Q D I T V D S N G I T T G I I N
ggaggctgataatctcacaaattgtataatggtttctacaaaacaccataatgtgtcgaa
G A D N L T I D S G F Y K T P K Y S V G
gattatgtatggaaagatacaaataaaggatggtatccaaaggatgacaatgaaaaggaaatt
D Y V W E D T N K D G I Q D D N E K G I
tctggatataaggatgaaaaggaaataatattagcactacaacaact
S G V K V T L K D E K G N I I S T T T T
gatggaaatggaaagtataattgtataattttgataattttgatggataatttttttttt
D E N G K Y Q F D N L D S G N Y I I H F
gagaaaccggaaaggcatgactcaactacaggcaatttttttttttttttttttttttttt
E K P E G M T Q T T A N S G N D D E K D
gctgtatggaaagatgttcgtttacgattactgtatgtatgtatgtatgtatgtatgtat
A D G E D V R V T D H D F S I D N
ggttatattgtacgatgttgcacatgttgcacatgttgcacatgttgcacatgttgcac
G Y F D D S D S D A D S D S D S D
agtgtactcgccggcagacagcgatgttgcacggcagacgtgactcagacggcagatgtgat
S D S D A D S D A D S D A D S D
tctgtactcagacagcgactcagacccggatgttgcattccgttccgttccgttccgttccgtt
S D S D A D S D A D S D S D S D

FIG. 2 (cont'd)

FIG. 2 (cont'd)

agtgattccgattccgataggcattcagatttctgatgttgcgttctgactcaggactcaggac
S D S D S D S D S D S D S D S D
tcaggattccgataggcattcagatttgcgttctgactcaggac
S D S D S D S D S D S D S D S D
tcaggatagtgcgttccgataggatgttgcgttctgactcaggat
S D S D S D S D S D A D S D S D S D
agtggactcaggacaggatgttgcgttccgataggatgttgcgttctgactcaggac
S D S D A D S D S D S D A D S D
tcggatgttcaggatgttgcgttccgacaggacaggatgttgcgttctgactcaggat
S D S D S D A D S D S D S D S D S D
tccggatgttcaggatgttgcgttccgataggcgttccgataggactcaggac
S D S D A D S D S D S D S D S D S D

FIG. 2 (cont'd)

agcgattcagacaggactcagattccgataggattccgatttcagacaggatgc
 S D S D S D S D S D S D S D S D S D
 tcggattccgataggactcagacaggactcagattccgataggactcagat
 S D S D S D S D S D S D S D S D S D
 tcagacaggatggactcggataggatgcggatccgataggatccggat
 S D S D S D S D S D S D S D S D S D
 agcgattccgattcggataggactcggatccgataggatgcggat
 S D S D S D S D S D S D S D S D S D
 tccgattcagataggattccgactcagacaggatccggat
 S D S D S D S D S D S D S D S D S D
 tcagacaggattcggactcagacaggactccggatccggat
 S D S D S D S D S D S D S D S D A D
 agcgactccgattcagataggattccggacaggccggat
 S D S D S D S D A D S D S D S D S D
 tcagacaggattcggactcagacaggatccggat
 S D S D S D S D S D S D S D S D S D
 agcgactccgattcggactcagacaggatccggat
 S D S D S D S D S D S D S D S D S D
 tcggattcgtatggataatggaaaaatggataacaggaggaaatgaagatcat
 S D S D K N A K D K L P D T G A N E D H

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FIG. 2 (cont'd)

gattctaaaggcacattacttggaaacttattggcaggtttaggaggcattatttagga
D S K G T L L G T L F A G L G A L L L G
agacgtcgtaaaaaagataataaagaaaaataggcaactattgattcattcaaggtttt
R R K D N K E K * H Y - F I H K L F
caagccaggctatatggcctggttgaaatcatataaattgaaaaaggaaaggatga
Q A R S I W P G L K S Y - I E R R K R -
gtatgg
V W

FIG. 2(*cont'd*)

Sdrg coding and flanking sequences.

atattgcaaaaagacttatactatattgttactcttagaaacgattttacttgaa
I A K K T Y I L Y C I L L - K R F L L E
aattacattgaaatagtcaaaagataaaggagtttatgattaaaaaaaataatttacta
N Y I E I V K D K E F L - L K K N N L L
actaaaaagaaacctataaggcaaaataatccaaatattgcaatttagaaaaattcacagta
T K K P I A N K S N K Y A I R K F T V
ggcacgcgtcttatgttaataaggcattatgtcaggcattttgggttaggtcataatgaggcc
G T A S I V I G A A L F G L G H N E A
aaaggctggggaaatacaggtaacaaggacgttaaaggatcgaaatattgatgatgatgatca
K A E E N T V Q D V K D S N M D D E L S
gatagcaatgcgtcccgtaatgtaaaggaaatgtatgttaataatgtcaggta
D S N D Q S S N E E K N D V I N N S Q S
ataaacaccgtatgtataacccaaataaaaaaggaaacgaaatacgatgcccata
I N T D D N Q I K K E E T N S N D A I
gaaaatcgcttaaaggatataacacagtcacaaatgtatgtatgaaacgaaaggcaaca
E N R S K D I T Q S T T N V D E N E A T
tttttacaaaaaggacgcctcaagataatactcagcttaaagaaggatggtaaaaaggaaaccc
F L Q K T P Q D N T Q L K E E V V K E P
tcatcagtcgaatccatcaatggatactggcccaacaaccatctcatacaacaaca
S S V E S N S S M D T A Q P S H T T

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FIG. 3

FIG. 3 (cont'd)

attacctacactttacagatttagataaataatgaaaaattaaaggccacccaaaa
I T Y T F T D Y V D K Y E N I K A H L K
ttaacatcatcattgataaataatcaaaggttccaaataactaataactaaggtagaa
L T S Y I D K S K V P N N T K L D V E
tataaggacggcccttcatcagtaataaaacaaattacggttgaatataaaaaacctaac
Y K T A L S S V N K T I T V E Y Q K P N
gaaaatcggactgcttaaccttcaaaatgttccaaaaacatacgaaaaacccataca
E N R T A N L Q S M F T N I D T K N H T
gtttagccaaacgattataaccctcttcgttattcagccaaaggaaacaaatgttaat 15
V E Q T I Y I N P L R Y S A K E T N V N / 28
attcaggaaatggcgatgaaaggttcaacaattatcgacgatagttacaatcataaatgtt

FIG. 3 (cont'd)

FIG. 3 (cont'd)

aattctgtatggtaacttaacggacaaggacatgtacttgcattttat
 N S V W V T I N G Q D D M T I D S G F Y
 caaacacctaataataggaaactttaggtatgtatggatcactaaaggatggatt
 Q T P K Y S L G N Y V W Y D T N K D G I
 caaggatgtgaaaaggaaatctggaggtaaaaggtaacgttaaaaggatggaa
 Q G D D E K G I S G V K V T L K D E N G
 aatatacttagtacaacaactgtgaaaatggaaaggatcaattgataatttaaat
 N I I S T T D E N G K Y Q F D N L N
 agtggtaatttattgttcatttgataaacccttcaggatgtactcaaacaacagat
 S G N Y I V H F D K P S G M T Q T T D
 tctggatgtgacgaaacaggatgtgatggaaaggatccatgtaaacaattactgat
 S G D D E Q D A D G E E V H V T I T D 17
 catgatgactttagtatacgatactatgtacgtacgactcagatcagatgtat
 H D D F S I D N G Y D D S D S D S D
 tcagactcagatgtcgacgtcagactccgatgtccgactcagacagcgactca
 S D S D S D S D S D S D S D S D S
 gattcccgatgtgatgtcagatcagacgtgactcagactcagatgtgattcagatca
 D S D S D S D S D S D S D S D S
 gacaggcgattccgactcagacgtgactcaggatttagacaatagctcagataagaataca
 D S D S D S D S G L D N S S D K N T

FIG. 3 (cont'd)

aaagataattaccggatcacaggagcttaatgaaagatcatgattctaaaggcacattactt
K D K L P D T G A N E D H S K G T L L
ggagctttttgcaggtttagggcgtttatttagggaaaggcgccggaaataggaaaaa
G A L F A G L G A L L G K R R K N R K
ataaaaaattcaattttcaatattcaatattcaatattcaatattcaatattcaatatt
N K N * I I Q M K L V K E A D T T F E -
aaagtatatttagtccaaataaagggtttg
K V Y L V Q Q - G I - G V

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FIG. 3 (cont'd)

sdrB coding region

atgaaaatgttaacatcaaattcatttatgcgttacgggtttcatggtaact
M K K F N I K H S F M L T G F A E F M V T
acatcatattcaggccaaaggcacatgtgaaggtaatcatcattgacatttt
T S L F S H Q A H A E G N H P I D I N F
-
tctaaagatcaaattgtataaatacagotaatcaaaggcaataatcgaggatgttt
S K D Q I D R N T A K S N I I N R V N D
actagtccacaggaaatttagtatgttatggataatcggttt
T S R T G I S M N S D N D L D T D I V S
aatagtggactcagaaaaatgacacatatttagataatgtgattcaggacatgttt
N S D S E N D T Y L D S D S D S D S D S
gattcaggatagtggactcaggattcaggataggactcaggatgttt
D S D S D S D S D S D S D S D S D S
gacaggatgtttcaggactcaggatgtggactcaggatgttt
D S D S D S D S D S D S D S D S D S
gattcaggatgtttcaggactcaggatgttt
D S D S D S D S D S D S D S D S
gattcaggatgtttcaggatgtttcaggatgttt
D S D S D S D S D S D S D S D S
gacaggatgtttcaggatgtttcaggatgttt
D S D S D S D S D S D S D S D S
-
D S D S D S D S D S D S D S D S

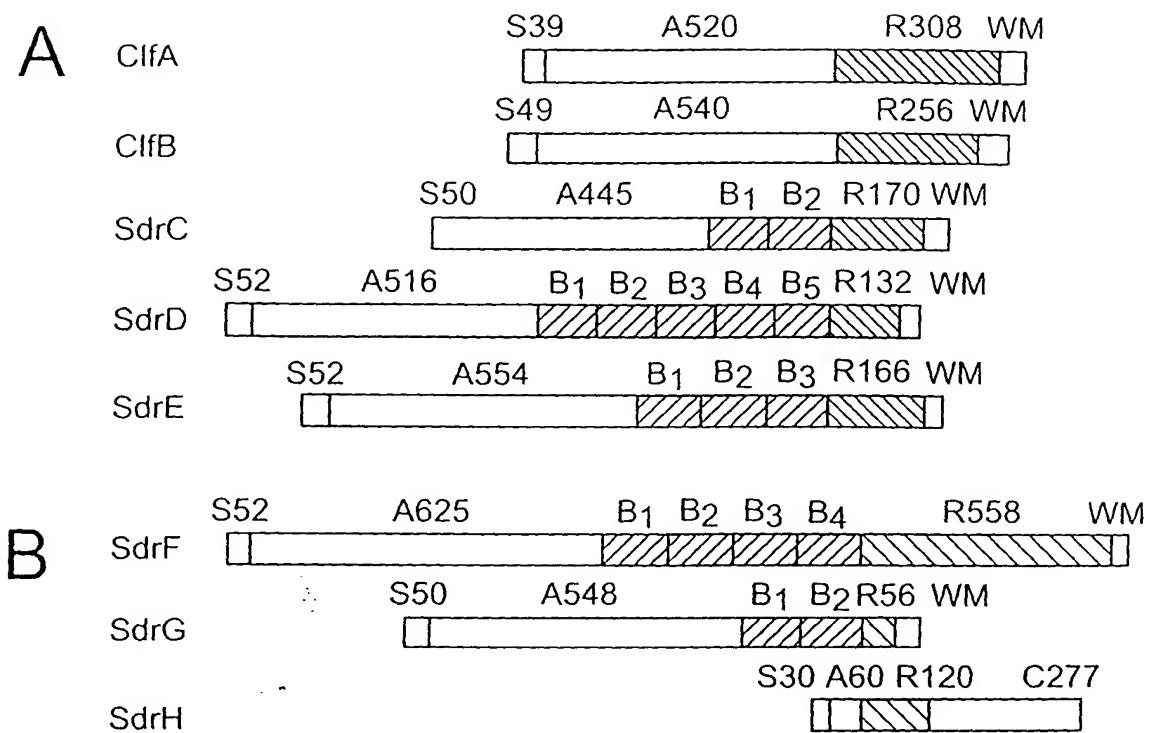
FIG. 4

gactcaggattcagataatgtgattcaggactctggtacaaggttcaggtaagggttccacatacc
 D S D S D S G T S G K G S H T
 gggaaaaaacccctggtaacccttaaaggaaatacacaataggacccttccaaaggacatacgaaat
 G K P G N P K G N T N R P S Q R H T N
 caaccccaaggccctaaatacaatcaaaacaaatcaatccaaataaaacataataaaccat
 Q P Q R P K Y N Q T N Q N N I N N I N H
 aatattaaatcatacaatcactatgtggatggatgtggcgccctttaaacgtcaaaataatttt
 N I N H T R T S G D G A P F K R Q Q N I
 attaatttaattcaggatcatagaatcaaataatcaatcaattttatggaaacaaa
 I N S N S G H R N Q N I N Q F I W N K
 aatggcttttaattcaaaataataccgaaacatagaatggaaatggataatcc
 N G F F K S Q N T E H R M N S D N T
 aatttcattaaatggcaggattcagacaatttagccacgggtggcttataaggatccgttt
 N S I S R F R Q L A T G A Y K Y N P F
 ttgatttaatcaaggtaaaaaattttgaatcaatttagatggaaagggtggacagatgtgacatt
 I I N Q V K N L N Q L D G K V T D S D I
 tataggctttagaaaggcaatccatttagggaaatggaaatattttaaatttacaaaaaa
 Y S L F R K Q S F R G N E Y L N S L Q K
 ggacaaggctttagattcaatatttaattccacttaatttagttaactatgaa
 G T S Y F E R F Q Y F N P L N S S K Y Y E

FIG. 4 (cont'd)

aatttagatgatcaggtttagcttaattacaggagaattcggtcaatgccagaacct
 N L D D Q V L A L I T G E I G S M P E L
 aaaaacctacggataaaagaatcatagcggccttcaaaaaccataatggcagat
 K K P T D K E D K N H S A F K N H S A D
 gagataacaacaaataatggacactccaaagattatgataaaggaaaaatacat
 E I T T N N D G H S K D Y D K K K I H
 cgaagtcgttatcgtttaagtattgcaataattggaattttctaggagtcactggacta
 R S L L S L S I A I I G I E L G V T G L
 tatacttttagaaaaaaggtaa
 Y I F R R K K *

FIG. 4 (cont'd)



C SdrF SDSDSDSDSDSDKNAKDKLPDTGANEDHDSKGTLGTLFAGLGALLGRRRKDNKEK
 SdrG SDSDSGLDNSSDKNTKDKLPDTGANEDHDSKGTLGALFAGLGALLGKRRKNRKNK
 SdrH DKNHSAFKNHSADEITTNNDGHSKDYDKKKIHRSSLSSIAIIGIFLGVGTGLYIFRKK

FIG. 5

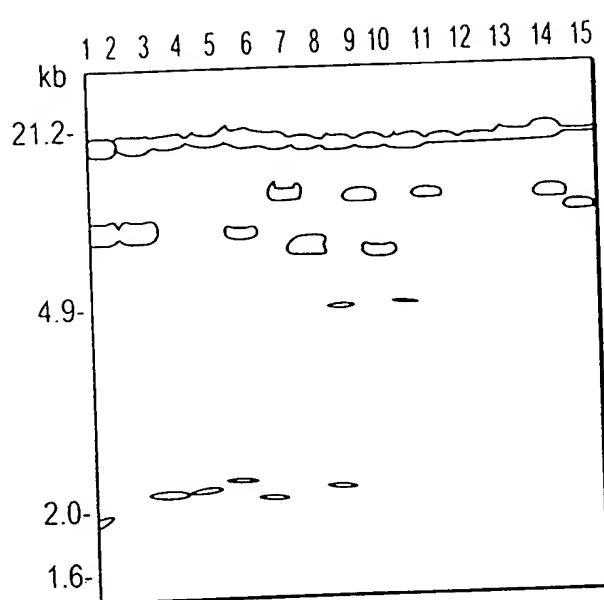
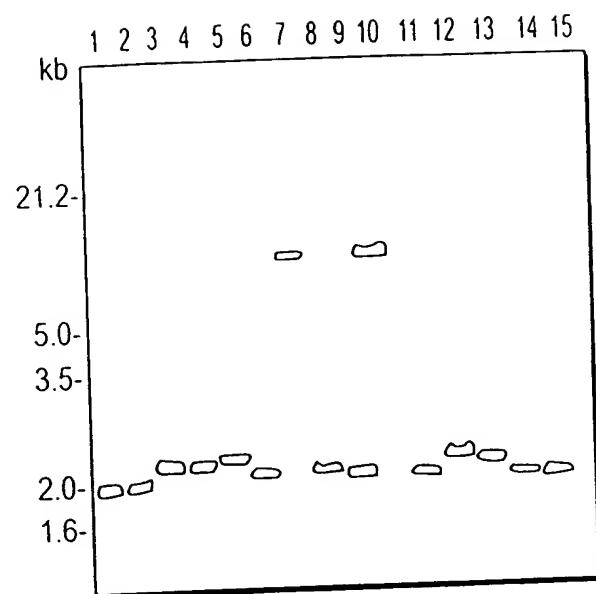
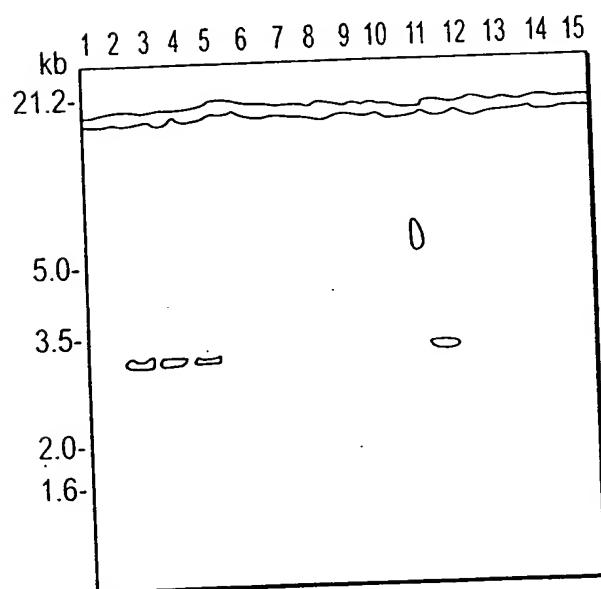
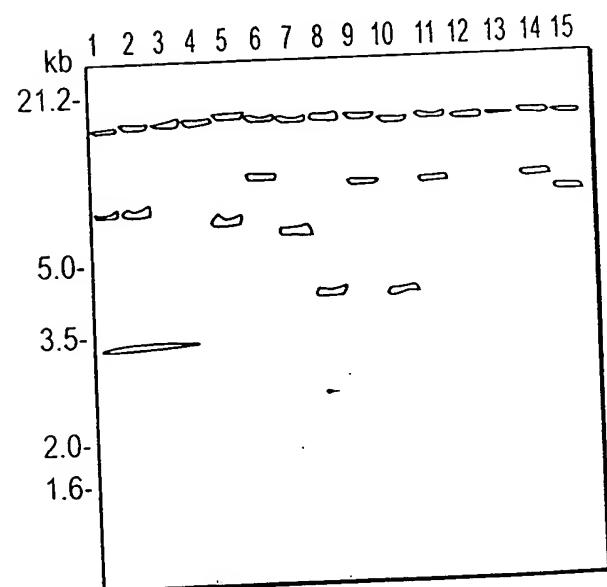
**FIG. 6A****FIG. 6B****FIG. 6C****FIG. 6D**

FIG. 7A

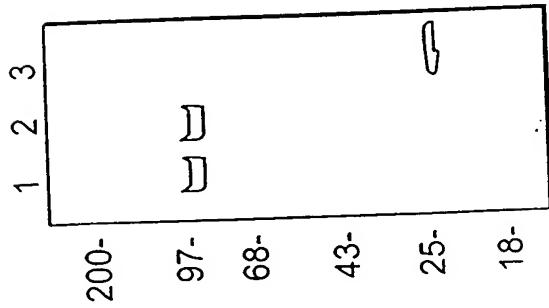


FIG. 7B

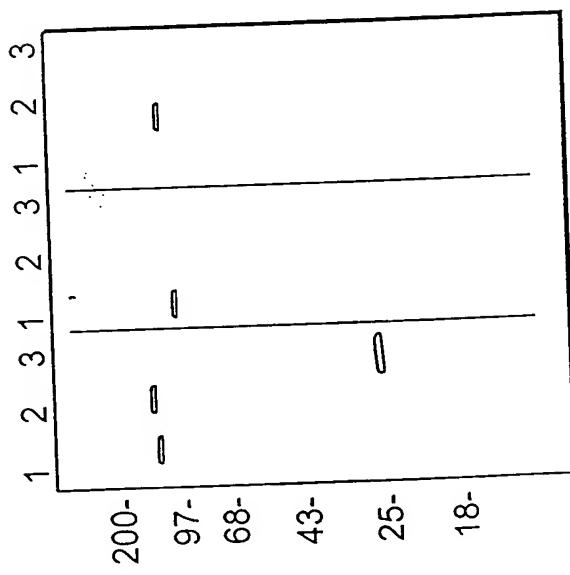
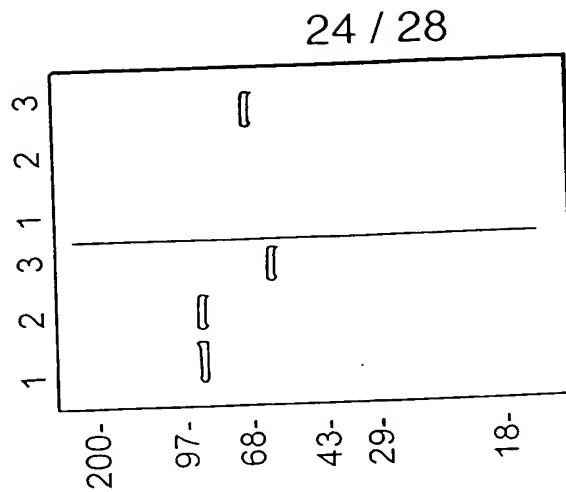


FIG. 7C



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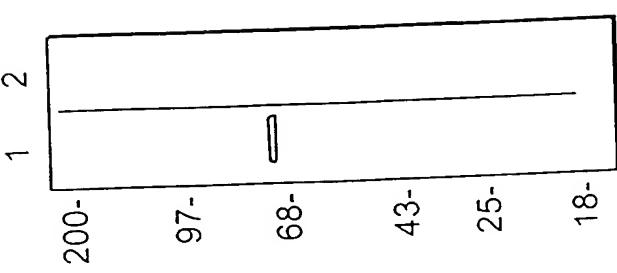


FIG. 8C

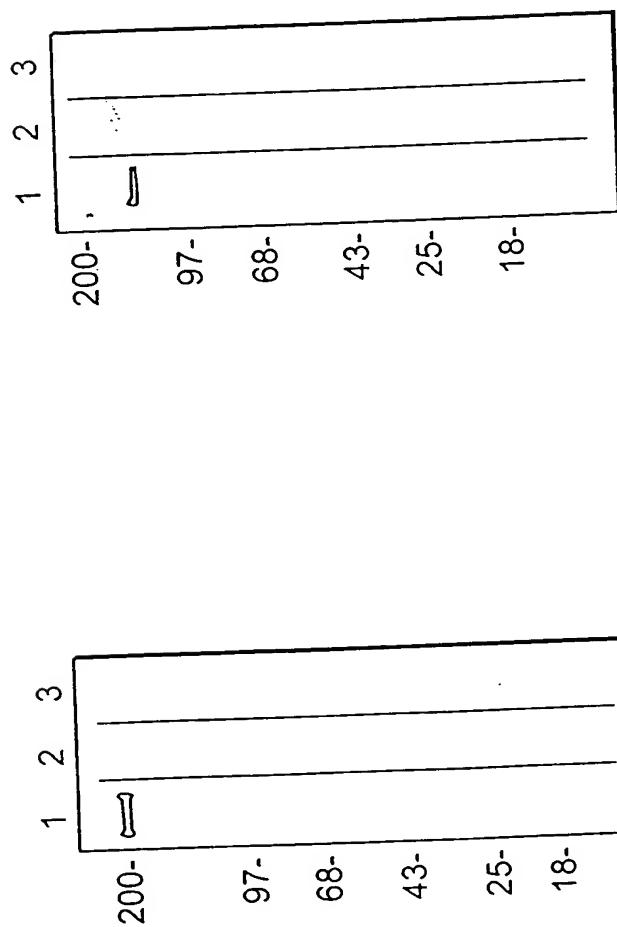


FIG. 8B

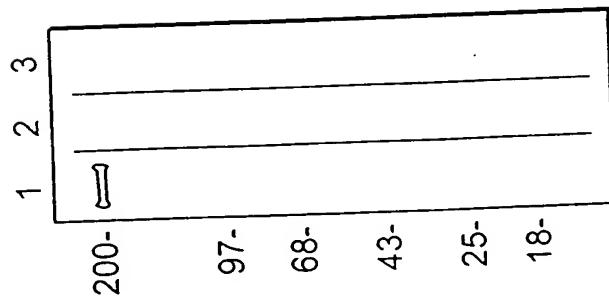


FIG. 8A

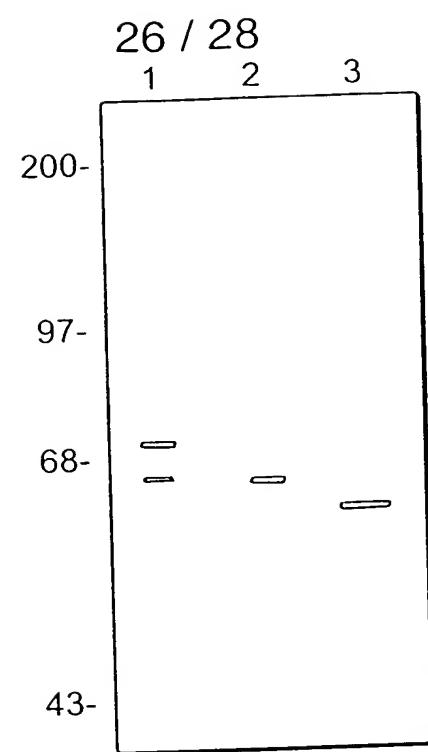


FIG. 9A

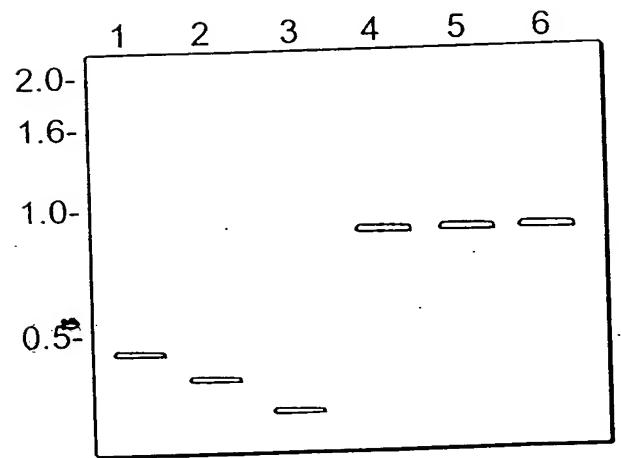


FIG. 9B

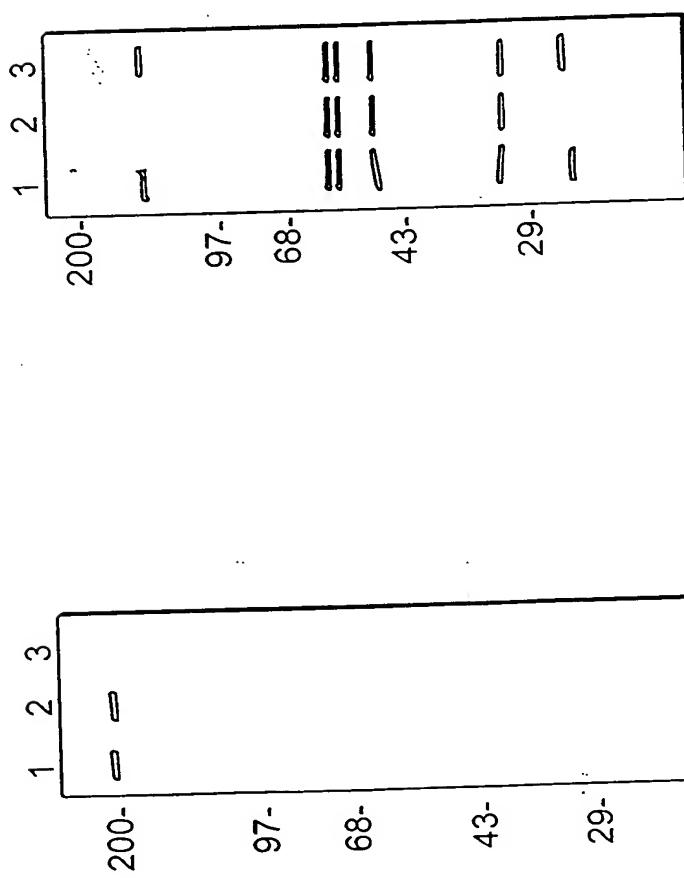
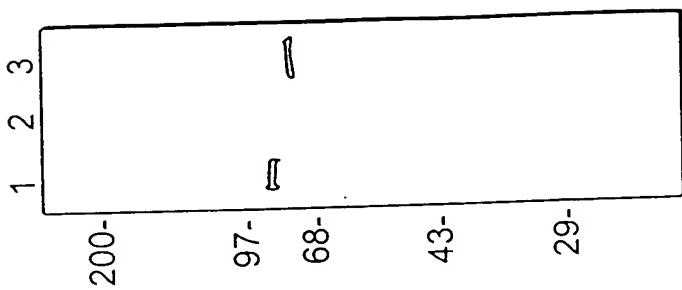


FIG. 10A

FIG. 10B

FIG. 10C

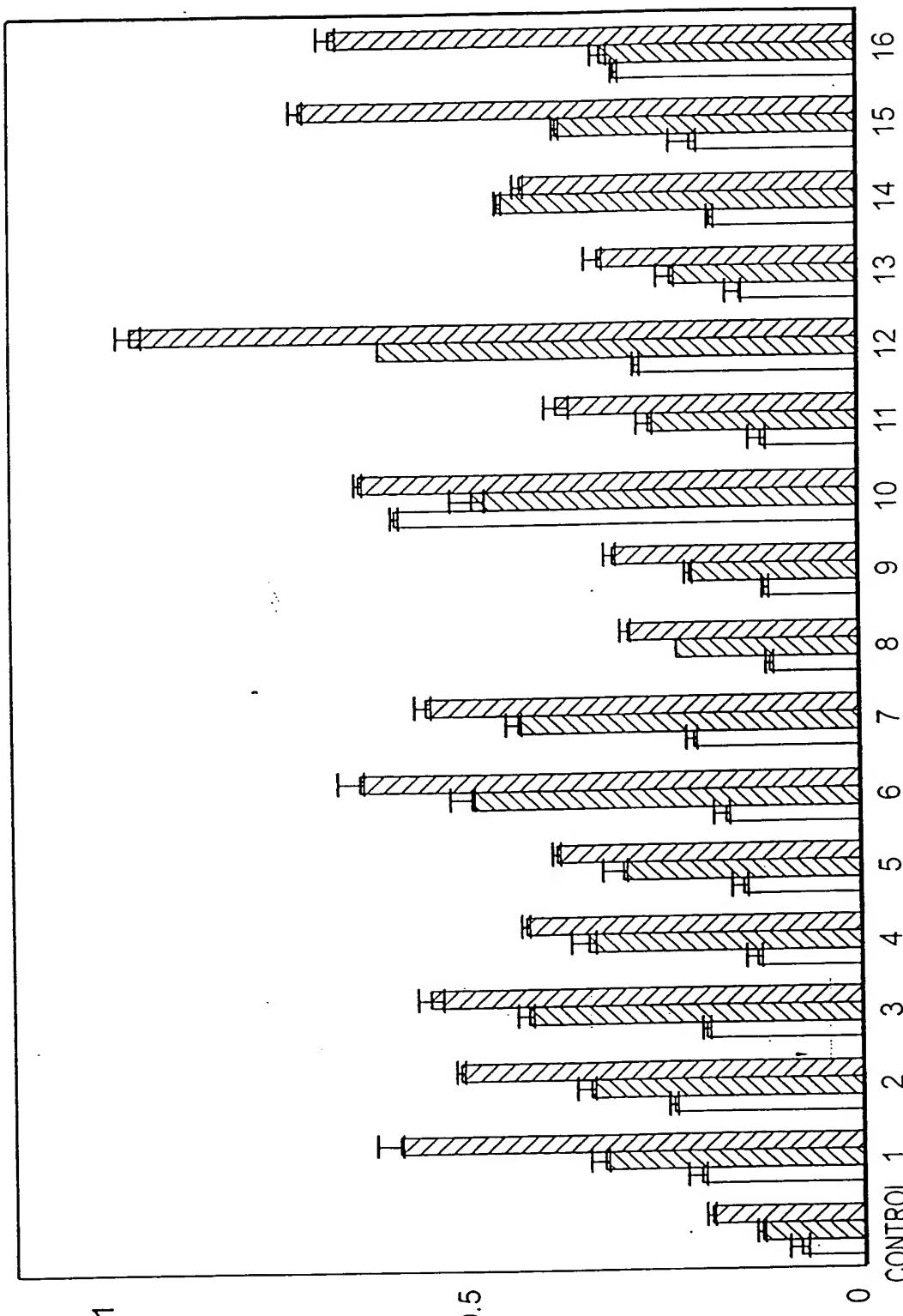


FIG. 11